



UNITED STATES PATENT AND TRADEMARK OFFICE

cm
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,065	11/21/2001	Reynaldo M. Rincon	TI-32568	4865

23494 7590 11/06/2002

TEXAS INSTRUMENTS INCORPORATED
P O BOX 655474, M/S 3999
DALLAS, TX 75265

EXAMINER

NGUYEN, JIMMY

ART UNIT PAPER NUMBER

2829

DATE MAILED: 11/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/992,065

Applicant(s)

RINCON ET AL.

Examiner

Jimmy Nguyen

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 16 is/are pending in the application.
- 4a) Of the above claim(s) 13 - 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1 - 12, drawn to probe card apparatus for contacting and testing IC, classified in class 324, subclass 754.
 - II. Claims 13 - 16, drawn to method of fabricating a dual plane probe card, classified in class 29, subclass 593.
1. Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention II has separate utility such as fabricating a semiconductor device or an BGA See MPEP § 806.05(d).
2. During a telephone conversation with Mr Micheal on 10/30/02 a provisional election was made without traverse to prosecute the invention I, claims 1 - 12. Affirmation of this election must be made by applicant in replying to this Office action. Claims 13 - 16 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.
3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

3. Claims 1 – 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Kasukabe et al US (6305230).

As to claim 1, Kasukabe et al disclose (fig 2) a dual probe card apparatus for contacting and testing IC chips including:

A probe card (fig 2) substrate having first and second major surfaces;

Probe card substrate (44) offset to form a centrally located horizontal plane (area of the contact tip terminal), a sloped intermediate area (area starting curving), and a peripheral plane parallel (area of circuit board 50) to the first horizontal plane (area of the contact tip terminal);

A plurality of probes contacts (47) arrayed on the first surface of central plane in a pattern to mirror the contact pads of a DUT (2);

Art Unit: 2829

An array of conductive traces (44) adhered to first substrate surface by a flexible insulating film (66) wherein the traces fan from the probe contacts (47) to conductive vias (50b) on the peripheral plane; and

An array of conductive vias (50b) connecting conductive traces (48) the first surface to probe head contacts on the second surface.

As to claim 2, Kasukabe et al disclose (fig 2) the substrate comprises single structure (44).

As to claim 3, Kasukabe et al disclose (fig 2) the probe card comprises a composite polymer (column 8 line 37 – 40).

As to claim 4, Kasukabe et al disclose (fig 2) the substrate (44) comprises a laminate polymer (column 8 line 46 – 49)

As to claim 5, Kasukabe et al disclose (fig 2) the conductive traces (48 is lead or wire made by copper) comprises a continuous copper member.

As to claims 6, 7, Kasukabe et al disclose (fig 2) the probe contacts comprise gold stud bumps (column 21 line 1 – 3) and it is micro probe (47).

Art Unit: 2829

As to claim 8, Kasukabe et al disclose (fig 2) the conductive vias (50b, is a wire or lead made by copper).

As to claim 9, Kasukabe et al disclose (fig 2) an elastomeric polymer (46, line 48 - 51) disposed to fill the depressed central area from the second surface.

As to claim 10, Kasukabe et al disclose (fig 2) the dimension of selected conductive traces are optimized for low inductance values (column 7 line 49 – 60).

As to claims 11, 12, Kasukabe et al disclose (fig 2) the probe contacts are below the level of the retaining ring (in most of the cases) and the diameter of probe contact (47) is smaller than contact pads of DUT.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Nguyen at (703) 306-5858. Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4900.

JN.
Oct 31, 2002


KAMAND CUNEO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800